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AFRICAN MUSCIDAE.—I

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In the present contribution the genus *Idiopygus* Malloch is discussed and a key to the known species presented. Two new species are described and notes given on the species described previously. Up to the present time the genus is known only from Africa.

IDIOPYGUS Malloch

MALLOCH, 1921, Ann. Mag. Nat. Hist., VIII, p. 229.

Lobes of fifth sternite of the male long and narrow; scutellum bare on the sides; anterior intra-alar bristle absent or situated behind the anterior postsutural dorsocentral bristle; hypopleura bare or with a few short hairs near the posterior spiracle; wings with three brown spots on the crossveins, one on the anterior and two on the posterior; squamae not expanded inwardly; posterior spiracle small; posterior tibiae without posterodorsal bristles or with a rather short one near the middle; arista plumose; eyes bare.

The genus resembles *Helina* Desvoidy in many respects, but it is readily distinguished in the male by the large genitalia and fifth sternite. There are usually only three sternopleurals, but the lower one may be duplicated and situated almost equidistant from the upper two. The position of the posterodorsal bristle on the posterior tibia distinguishes the genus from *Phaonia* Desvoidy and the bare wing veins from other allied genera. The genotype is *Spilographa hirtipes* Macquart.

The synonymy of the species is confused because Stein described species in both *Spilogaster* amd *Mydaea*. It is quite obvious that Malloch's *hirtipes* is identical with *mirabilis* Stein, his *ulundi*, originally described as *trochanteratus* is very likely the same as *Mydaea trochanterata* Stein and the female which Malloch thought might be *trimaculata* Stein is very probably *hirtipes* Macquart. However, it is by no means a safe practice to place species in synonymy without examining the types, and for this reason we should retain the names, at least as doubtful, until this has been done. Fortunately, Malloch's descriptions will permit of a comparison with Stein's types, since all the essential characters are enumerated.

Idiopygus contains at least ten species and a key to these is presented. The females are poorly known and will remain so until large collections are made. It is possible that some other described species belong in this genus, but it will be impossible to decide unless the types are examined.

Key to the Males

1.—Posterior tibiae remarkably dilated and hairy; sternopleura produced downward to form two mammiform processes between the front and middle coxae . . . 2.
Posterior tibiae simple in structure, sometimes densely haired . . . . . 3.
2.—Legs entirely black except the extremely narrow knees . . . . . *hirtipes* Macquart.
Legs with at least the posterior femora reddish on the basal two-thirds. *mirabilis* Stein.
3.—Legs black except the narrow knees . . . . . 6.
Legs with at least the posterior four femora or the tibiae largely reddish . . . . . 4.
4.—Tibiae wholly reddish; posterior four femora with median black band or the posterior pair wholly reddish . . . . . *major*, n. sp.
Tibiae mostly black; posterior four femora reddish with the apical third black . 5.
5.—Mesonotum brown with the sides and two slender dorsocentral vittae cinereous; all the legs reddish basally . . . . . *bequaerti*, n. sp.
Mesonotum cinereous, with four brown vittae; front legs wholly black. *quadruplex* Stein.
6.—Front and posterior tibiae with rather dense hair which is about as long as the tibial thickness . . . . . *villipes* Malloch.
Tibiae with short, mostly appressed hair . . . . . 7.
7.—Posterior trochanters with numerous short, stout, angularly bent bristles (*trochanterata* Stein ?) . . . . . *ulundi* Malloch.
Posterior trochanters with ordinary or soft hairs . . . . . 8.
8.—Median brown mesonotal vitta extending over the scutellum . . *trimaculatus* Stein.
Median brown vitta not extending on to the scutellum . . . . . 9.
9.—Hypopleura with hairs below the spiracle . . . . . *hirtiventris* Malloch.
Hypopleura bare . . . . . *wroughtoni* Malloch.

Females

1.—Legs wholly black . . . . . 4.
Legs partly or wholly yellowish . . . . . 2.
2.—Anterior femora black basally . . . . . 3.
Anterior femora broadly reddish basally . . . . . *?bequaerti*, n. sp.
3.—Posterior four femora and tibiae wholly yellow . . . . . *major*, n. sp.
Posterior four femora black apically . . . . . *mirabilis* Stein. *quadruplex* Stein.
4.—Anterior intra-alar bristle absent . . . . . 5.
Anterior intra-alar bristle present . . . . . *hirtiventris* Malloch.
5.—Stenopleura distinctly produced downward . . . . . *hirtipes* Stein.
Sternopleura not produced downward . . . . . *trimaculata* Stein. *villipes* Malloch. *wroughtoni* Malloch. *ulundi* Malloch.

Idiopygus hirtipes Macquart

Spilogaster hirtipes Macquart, 1846, 'Dipt. Exot.,' Suppl. 1, p. 202.
Mydaea hirtipes Stein, 1913, Ann. Mus. Nat. Hung., XI, p. 486.

Male, Vumba, Southern Rhodesia, November, 1932, at faeces (A. Cuthbertson).

A black species with remarkably shaped posterior tibiae, villous front tibiae, and a long, mammiform process in front of each middle coxa, the apex with several coarse, backwardly directed short bristles; basal segment of posterior tarsi swollen and with a row of anterodorsal bristles; front one-fifth of the head-width. Mesonotum with four narrow brown vittae, all abbreviated posteriorly, the middle pair replaced behind by a short central vitta. Scutellum wholly cinereous. Abdomen with three pairs of large brown spots.

This species is so easily recognized by the shape of the tibiae, processes of the sternopleura, and wholly black legs that a complete description is unnecessary.

Idiopygus mirabilis Stein

Spilographa mirabilis Stein, 1906, Berl. Ent. Zeitschr., LI, p. 56.
Idiopygus hirtipes Malloch, 1921, Ann. Mag. Nat. Hist., VIII, p. 230 (not Macquart).

In the reference cited above, Malloch has given a complete description of this species. It will be easily recognized by the shape of the posterior tibiae, mammiform sternopleural processes, and the reddish posterior femora with the apical third black.

Idiopygus major, new species

Black, cinereous pollinose; anterior tibiae with dense, long hair; posterior four legs mostly reddish; posterior trochanters of male with short, coarse bristles. Length, 8 to 10 mm.

Male.—Head whitish pollinose, the frontal vitta black, the ocellar triangle surrounded by whitish. Front scarcely one-fifth of the head-width, with three or four pairs of frontals on the anterior half; ocellars long; outer verticals absent; occiput and cheeks with black hair; cheeks two-sevenths as wide as the eye-height. Parafacials wider than the third antennal segment. Palpi, proboscis and antennae black; basal antennal segments white above; arista long plumose.

Thorax black, densely cinereous pollinose, the dorsum cinereous yellowish; mesonotum with a pair of slender brown vittae just outside the acrostical line and in some views with blackish appearing vittae along the line of the dorsocentrals. Acrosticals, 0–1; dorsocentrals, 2–3; anterior intra-alar strong; prealar absent; four pairs of marginal scutellars, two pairs weak; sternopleurals, 2–2, the hairs bristle-like; sternopleura with a tuft of bristles immediately in front of and between the middle coxae.

Coxae black, cinereous pollinose, the posterior pair with rather abundant bristly hairs apically in front. Trochanters red, the posterior pair with abundant, short, stout bristles below. Anterior femora black, cinereous pollinose, with rather abundant bristles on the basal fourth below, the usual row of posterodorsal and posteroventral bristles and many bristles between these rows except apically; middle femora black, gray pollinose, with both ends broadly reddish; with rather numerous bristles posteriorly and posteroventrally, a row of strong bristles on the anterodorsal surface and an incomplete anteroventral row, the hair rather long basally; posterior femora reddish, usually broadly black, and gray pollinose in the middle, with rather abundant, long bristles anteroventrally, a row anterodorsally and fine bristly hair on the apical half of the posteroventral surface. Anterior tibiae reddish yellow, clothed beneath with very long, coarse, black hair which becomes soft and brown in color apically; middle tibiae reddish yellow, the lower apex produced triangularly forward and densely clothed with short black hair, posteriorly with two bristles, before the apex on the under surface with an unusually coarse bristle which is gently, doubly curved near the apical fifth; posterior tibiae gently arcuate, reddish yellow, beneath with moderately abundant, but by no means dense, long black hair, anterodorsally with two bristles near the middle, posterodorsally with long, fine bristles. Tarsi black, the anterior pair clothed behind with moderately long black hair; basal segment of the middle tarsi with a posterodorsal row of short black bristles and below these, just before the middle, subtriangularly produced, the process bearing short, black bristly hairs; posterior tarsi simple.

Wings cinereous hyaline, somewhat yellowish basally, with the usual three brown spots. Squamae white. Halteres yellow.

Abdomen cinereous pollinose; second and third segments each with a pair of broadly separated brown spots, the second with quite weak marginal bristles in the middle, the third and fourth each with strong marginals, the fourth with strong discals, the third with one or two pairs of short discals. Ventral borders of the tergites with abundant soft hair. Sternites brown, thinly pollinose. Lobes of fifth sternite reddish and unusually short for the genus. Genitalia large, cinereous pollinose, rather long-haired.

FEMALE.—Front almost half as wide as the head, with the white of the ocellar triangle extending more than halfway to the antennae; four pairs of frontals and a row of hairs outside them. Three or four sternopleurals. Anterior femora black, cinereous pollinose; tibiae and posterior four femora reddish yellow; tarsi black. Fourth abdominal segment without marginals, carinate at the apex above.

TYPES.—Holotype, male, allotype, female, and two male paratypes, Witzieshork, South East Africa (Janson), received from Mr. C. J. Wainwright.

Despite the fact that this species has the lobes of the fifth sternite much shorter than in the other species I have seen, it seems to belong to this genus, since in all other respects the male is quite typical.

Idiopygus bequaerti, new species

Mesonotum black with two cinereous vittae and the lateral borders cinereous; femora broadly reddish basally. Length, 6.5 mm.

MALE.—Head black, whitish pollinose, the parafacials silvery. Front one-eighth the head-width, black, the orbits narrow; four pairs of frontals on the anterior half,

the posterior ones weakest; ocellars long and strong. Hair black. Cheeks one-fifth as wide as the eye-height. Parafacials narrower than the antennae. Proboscis, palpi, and antennae blackish; arista long plumose, brownish sub-basally. Eyes bare.

Thorax black; mesonotum brown pollinose, the broad sides and a pair of moderately wide vittae along the dorsocentral line cinereous white, the median vittae appearing partly black in some lights. Acrosticals absent; dorsocentrals, 2–3; anterior sublateral and prealar bristles absent; two pairs of strong scutellars, the apical pair decussate; sternopleurals, 1–2, the hair long and coarse. Scutellum brown with the border broadly gray except at the apex. Pleura cinereous pollinose, the mesopleura and upper part of the pteropleura brown or blackish.

Legs black, the basal third of the anterior and two-thirds of the posterior four femora reddish. Posterior femora with a row of anteroventral bristles on the apical half and two or three on the posteroventral surface; all the tibiae with two posterior bristles, the posterior pair with two long anterodorsal bristles medianly; anterior tarsi with apical posterior sensory hairs on each segment.

Wings cinereous hyaline, with the usual three blackish spots. Squamae white. Halteres yellow.

Abdomen black, cinereous pollinose, each segment with a median brown triangle which reaches the base broadly and expands posteriorly to form an apical fascia, which in turn expands to form less conspicuous lateral triangles, the brown markings on the first segment not extending forward in the middle, but emarginate, leaving two short, brown triangles projecting forward; on the fourth segment the posterior brown fascia is narrow and the median vitta less triangular. Lobes of fifth sternite long, rather shining, with bristles apically. Genitalia brownish pollinose.

HOLOTYPE.—Male, Rueru, southwest Mikeno, Belgian Congo, March 10, 1927, 9500 ft. (J. Bequaert).

This species agrees with *villipes* Malloch in having the pteropleura wholly bare.

Idiopygus quadruplex Stein

Mydaea quadruplex STEIN, 1913, Ann. Mus. Nat. Hung., XI, p. 489.

This species is unknown to me, but it is very similar in color to *bequaerti*, new species. However, it has the front femora wholly black and cinereous-pollinose thorax, the mesonotum with four narrow brown vittae. It was described from Abyssinia.

Idiopygus villipes Malloch

MALLOCH, 1921, Ann. Mag. Nat. Hist., VIII, p. 232.

Described from Kenya.

Readily recognized by the wholly black legs and villous anterior and posterior tibiae, the hair being about as long as the tibial thickness.

Idiopygus ulundi Malloch

Idiopygus trochanteratus Malloch, 1921, Ann. Mag. Nat. Hist., VIII, p. 233 (not Stein ?).

Idiopygus ulundi Malloch, 1922, Ann. Mag. Nat. Hist., X, p. 134.

? Mydaea trochanterata Stein, 1914, 'Voy. Allauad and Jeann.,' Dipt., p. 110.

? Idiopygus trochanteratus Malloch, 1922, Ann. Mag. Nat. Hist., X, p. 134.

This species, if there is only one species possessing the character of wholly black legs and coarsely setose posterior trochanters, will be readily recognized. It seems likely that only one species is represented, but this cannot be definitely determined from the descriptions. Stein described *Mydaea trochanterata* from East Africa, whereas the type of *ulundi* was from Natal. The short spines on the posterior trochanters are stout and bent at a right angle apically.

Idiopygus trimaculatus Stein

Spilographa trimaculata Stein, 1906, Berl. Ent. Zeitschr., LI, p. 58.

Black, legs not villous; brown median mesonotal vitta extending over the scutellum. Length, 6 mm.

Male.—Head white pollinose; frontal vitta wide, dull black; front one-eighth of the head-width; three or four pairs of frontals, the upper ones weak; ocellars long; outer verticals absent. Hair black. Cheeks slightly more than one-fifth as wide as the eye-height. Parafacials about as wide as the third antennal segment. Proboscis, palpi and antennae brown; arista long plumose. Eyes practically bare.

Thorax cinereous-white pollinose, the mesonotum with three broad brown vittae, the median one extending to the apex of the scutellum. Acrosticals absent; dorsocentrals, 2–3; one intra-alar; supra-alar very long; prealar absent; sternopleurals, 1–2, the lower one far from the posterior.

Legs blackish, the femora with thin grayish or pale brownish pollen. Anterior femora with long, bristly hair behind and a row of bristles above and below; middle femora with a row of anterior bristles on the basal half, fine, bristly hairs on the anteroventral surface and an incomplete row of posteroventral bristles; posterior femora with a row of anteroventral bristles which curves upward so as to arise on the anterior surface on almost the basal half, an anterodorsal row of bristles, and two moderately long, coarse spines on the ventral surface, one at the basal fourth, the other near the middle. Anterior tibiae with a weak posterior bristle; middle tibiae with two posterodorsal bristles; posterior tibiae with a long anterodorsal bristle near the middle, a weak posterodorsal

bristle beyond the middle, and three or four bristly hairs on the postero-ventral surface. Tarsi simple.

Wings cinereous hyaline, with brown tinge toward the base, with the usual three brown spots. Squamae white. Halteres yellow.

Abdomen grayish pollinose, the tergites each bearing a very large brownish triangle which reaches the anterior margin and sides and is inclined to be produced forward just under the lateral edges, the triangle more or less divided in the middle on the basal two segments. Hair erect on the first segment, the following segments each with a row of weak discals and row of marginals. Venter cinereous pollinose; lobes of fifth sternite long, with row of long bristles laterally; genitalia brown pollinose.

FEMALE.—Front wide, a whitish triangle in front of the ocelli extending halfway to the antennae; parafrontals rather wide; five pairs of frontals, the upper two pairs reclinate, outer verticals weak. Hair of the legs short; spines absent on posterior femora. Abdomen more extensively grayish, the second segment with a pair of dorsal and lateral brown spots, the triangles broadly separated on the second and third segments and strongly expanded to form triangles on the under surface of the abdomen, the fourth segment with median brown vitta and weak lateral spots posteriorly; first and second segments without dorsal bristles, the third with a row of strong marginals, the fourth with a row of strong discals and weak marginals.

Male and female, Burunga, Congo (J. Bequaert); male, Wagira, Gara Mulata, Abyssinia (G. Kristensen).

Idiopygus hirtiventris Malloch

MALLOCH, 1921, Ann. Mag. Nat. Hist., VIII, p. 232.

Described from Nyasaland.

Resembles *trimaculata* Stein but the median dark mesonotal vitta does not extend on to the scutellum, the hypopleura bears some fine hairs below the spiracle and the venter bears conspicuous, rather soft hairs.

Idiopygus wroughtoni Malloch

MALLOCH, 1928, Ann. Mag. Nat. Hist., I, p. 471.

Similar to *hirtiventris* but the hypopleura is bare. The species was described from Natal.